

Bin Guan

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Education

Ph.D., 2008, Atmospheric and Oceanic Science, University of Maryland, College Park.
Thesis: Pacific sea surface temperatures in the twentieth century: variability, trend, and connections to long-term hydroclimate variations over the Great Plains. Advisor: **Sumant Nigam**. GPA=4/4.
M.Phil., 2003, Applied Physics, City University of Hong Kong, Hong Kong, China.
Thesis: Summer monsoon over the western North Pacific: the onset and the intraseasonal variations. Advisor: **Johnny Chan**.
B.S., 2000, Atmospheric Sciences, Nanjing University, Nanjing, China.
Thesis: A monotonic filter for limited area modeling.

Research Interests

Climate variability and change; water cycle in the climate system; regional climate and hydrology.

Honors/Awards

2011 Who's Who in America.
2008–: The Honor Society of Phi Kappa Phi.
2007–2008: Ann G. Wylie Dissertation Fellowship, University of Maryland Graduate School.
2007: Jacob K. Goldhaber Travel Award, University of Maryland Graduate School.
2003–2008: Research Assistantship, Department of Atmospheric and Oceanic Science, University of Maryland, College Park.
2001–2003: Postgraduate Studentship, City University of Hong Kong, Hong Kong, China.
1997, 1998: Outstanding Student Award, Nanjing University, Nanjing, China.
1996–1999: Scholarship, Nanjing University, Nanjing, China.

Research Experience

Postdoctoral Scholar (with Duane Waliser and Noah Molotch), Jet Propulsion Laboratory, Pasadena, California, Mar 2009–present.

Research Assistant (5 years), then Research Associate (2 months) (with Sumant Nigam), Department of Atmospheric and Oceanic Science, University of Maryland, College Park, Aug 2003–Feb 2009.

Graduate student researcher (with Johnny Chan), Department of Physics and Materials Science, City University of Hong Kong, Sep 2001–Aug 2003.

Undergraduate/graduate student researcher (with Yuan Wang), Department of Atmospheric Sciences, Nanjing University, Nanjing, China, Sep 1999–Aug 2001.

Teaching experience

Guest Lecturer, Department of Atmospheric and Oceanic Science, University of Maryland, College Park, Nov 2007.

Tutor, Department of Physics and Materials Science, City University of Hong Kong, Sep 2001–Aug 2003.

Referred Publications

- Guan, B.**, N. P. Molotch, D. E. Waliser, E. J. Fetzer, and P. J. Neiman, 2010: Extreme snowfall events linked to atmospheric rivers and surface air temperature via satellite measurements. *Geophys. Res. Lett.*, **37**, L20401, doi:10.1029/2010GL044696.
- Nigam, S., and **B. Guan**, 2010: Atlantic tropical cyclones in the twentieth century: natural variability and secular change in cyclone count. *Clim. Dynamics*, doi:10.1007/s00382-010-0908-x.
- Guan, B.**, and S. Nigam, 2009: Analysis of Atlantic SST variability factoring inter-basin links and the secular trend: clarified structure of the Atlantic Multidecadal Oscillation. *J. Climate*, **22**(15), 4228–4240.
- Guan, B.**, and S. Nigam, 2008: Pacific sea surface temperatures in the twentieth century: An evolution-centric analysis of variability and trend. *J. Climate*, **21**(12), 2790–2809.
- Guan, B.**, and J. C. L. Chan, 2006: Nonstationarity of the intraseasonal oscillations associated with the western North Pacific summer monsoon. *J. Climate*: **19**(4), 622–629.

Other Publications

- Guan, B.**, 2008: Pacific Sea Surface Temperatures in the Twentieth Century: Variability, Trend, and Connections to Long-Term Hydroclimate Variations Over the Great Plains. Ph.D. thesis, University of Maryland, College Park.
- Guan, B.**, 2003: Summer Monsoon Over the Western North Pacific: The Onset and The Intraseasonal Variations. M.Phil. thesis, City University of Hong Kong, Hong Kong, China.

Presentations

- Guan, B., N. P. Molotch, D. E. Waliser, Eric J. Fetzer, and P. J. Neiman, 2010: Extreme snowfall events in the Sierra Nevada linked to atmospheric rivers and surface air temperature via satellite measurements. Poster presentation, the 2010 JPL Postdoc Research Day, Pasadena, California.
- Guan, B., N. P. Molotch, D. E. Waliser, Eric J. Fetzer, and P. J. Neiman, 2010: Local and synoptic-scale characteristics of high- and low-impact atmospheric rivers in California. Poster presentation, the 2010 Western Pacific Geophysics Meeting, Taipei, Taiwan.
- Guan, B., N. P. Molotch, D. E. Waliser, Eric J. Fetzer, and P. J. Neiman, 2010: Local and synoptic-scale characteristics of high- and low-impact atmospheric rivers in California. Oral presentation, the 2010 AIRS Science Team Meeting, Pasadena, California.
- Guan, B., 2010: Atlantic sea surface temperatures and tropical cyclones: Decadal/multidecadal variations and trends. Yuk L. Yung Lunch Seminar, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California.
- Guan, B., N. P. Molotch, D. E. Waliser, Eric J. Fetzer, and P. J. Neiman, 2009: Atmospheric rivers and snow accumulation in the Sierra Nevada connected by surface air temperature. Poster presentation, the 2009 AGU Fall Meeting, San Francisco, California.

- Guan, B., N. P. Molotch, D. E. Waliser, Eric J. Fetzer, and P. J. Neiman, 2009: Atmospheric rivers and snow accumulation in the Sierra Nevada: relationship with mountain surface air temperature. Oral presentation, the 34th Climate Diagnostics and Prediction Workshop, Monterey, California.
- Waliser, D. E., N. P. Molotch, J. Kim and B. Guan, 2009: Atmospheric rivers: observation and modeling studies on the connections between tropical convection and West Coast hydrology. Oral presentation, CalWater Atmospheric Rivers Planning Meeting, Scripps Institution of Oceanography, La Jolla, California.
- Guan, B., 2008: Twentieth century SST trend and natural variability: clarified structure, and implications to Atlantic hurricane activities. Seminar, Shanghai Typhoon Institute, China Meteorological Administration, Shanghai, China.
- Guan, B., 2008: Pacific sea surface temperatures and long-term hydroclimate variations over the Great Plains. Yuk L. Yung Lunch Seminar, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California.
- Guan, B., 2008: Pacific sea surface temperatures and long-term hydroclimate variations over the Great Plains. Seminar, Joint Institute for Regional Earth System Science and Engineering, University of California, Los Angeles.
- Guan, B., 2008: Pacific and Atlantic SSTs in the twentieth century: a clarifying analysis of decadal/multidecadal variability structure. Seminar, Earth System Science Interdisciplinary Center, University of Maryland, College Park.
- Guan, B., 2008: Pacific sea surface temperature variability in the twentieth century: ENSO, decadal variability, and secular trend. Oral presentation at the Laboratory for Atmospheric Research, City University of Hong Kong, Hong Kong, China.
- Guan, B., 2008: Pacific sea surface temperature variability in the twentieth century: Spatiotemporal structures, and connections to long-term droughts over the Great Plains. Seminar, NOAA/Geophysical Fluid Dynamics Laboratory, Princeton University, Princeton, New Jersey.
- Guan, B., and S. Nigam, 2007: Pacific sea surface temperatures in the twentieth century: An evolution-centric analysis of variability and trend. Poster presentation, the 2007 AGU Fall Meeting, San Francisco, California.
- Guan, B., and S. Nigam, 2006: Pacific decadal SST variability 1900–2002: Structure and evolution. Oral presentation, the Eleventh Annual CCSM Workshop, Breckenridge, Colorado.
- Guan, B., 2005: Pacific decadal variability: Structure and mechanisms. Seminar, Department of Atmospheric and Oceanic Science, University of Maryland, College Park.

Professional Association

2010–: Member, Chinese-American Oceanic and Atmospheric Association.

2004–: Member, American Geophysical Union.

Service/Contributions

- Reviewer, *Journal of Climate*, and NOAA Climate Variability and Predictability Program
- Member, *Nature* Reader Advisory Panel (2010–)
- Developer/maintainer of 30+ GrADS scripts for climate analysis
- Developer/maintainer of gEOF—a MATLAB EOF toolbox for geoscience

Other Activities

- Partner, CalWater Science Team (2009–)
- Member, Water Supply and Management in California (ARRA Project 2009–2010)
- Participant, NASA California Water Resources Workshop, Pasadena, California, Sep 2009

- Participant (“River in the Sky”), the 2010 Caltech Art of Science Exhibition, Jun 2010, Caltech
- Participant, Making the Most of Your Presentation, workshop by Jean-luc Doumont, Apr 2010, Caltech